



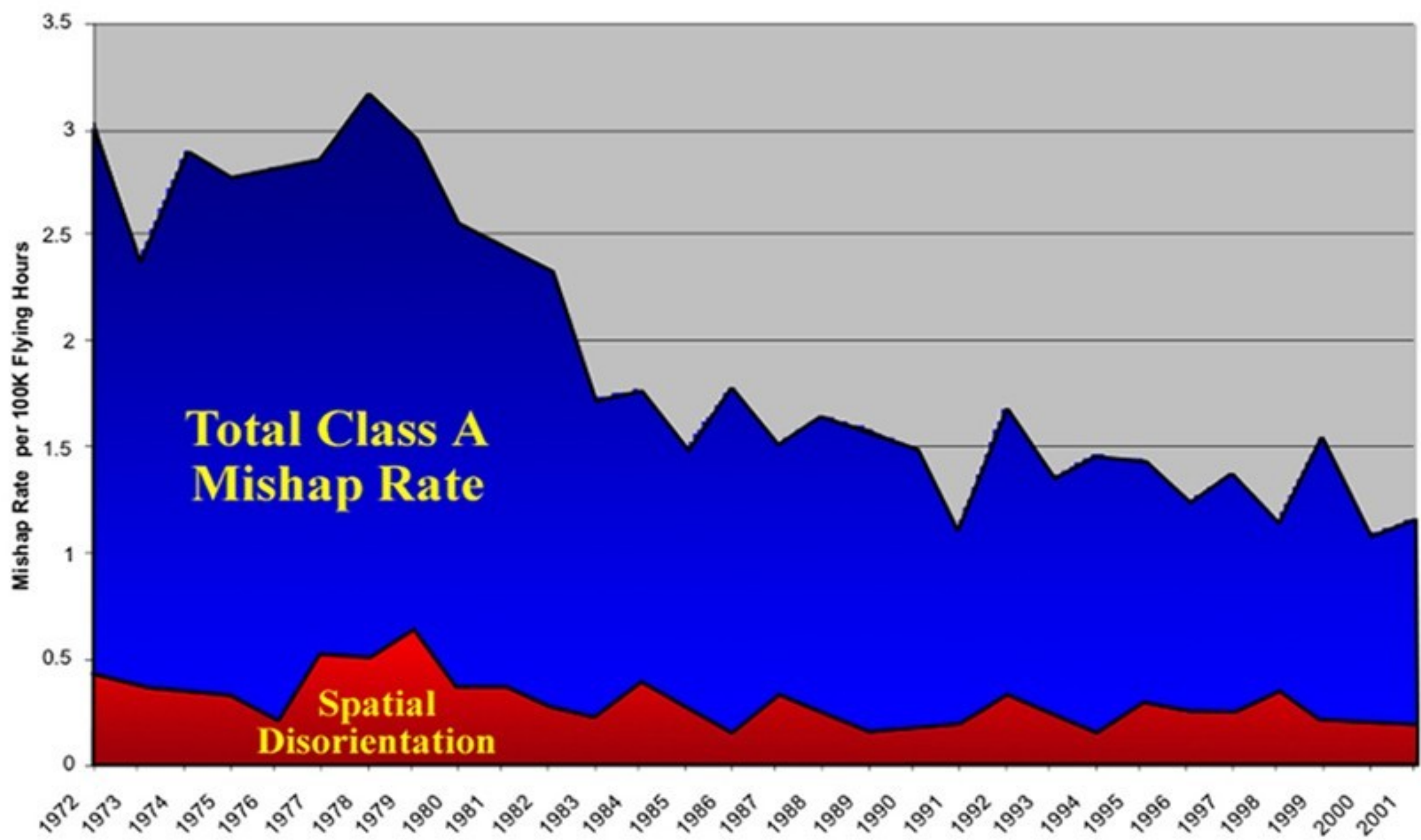
Multisensory Integration for Pilot Spatial Orientation

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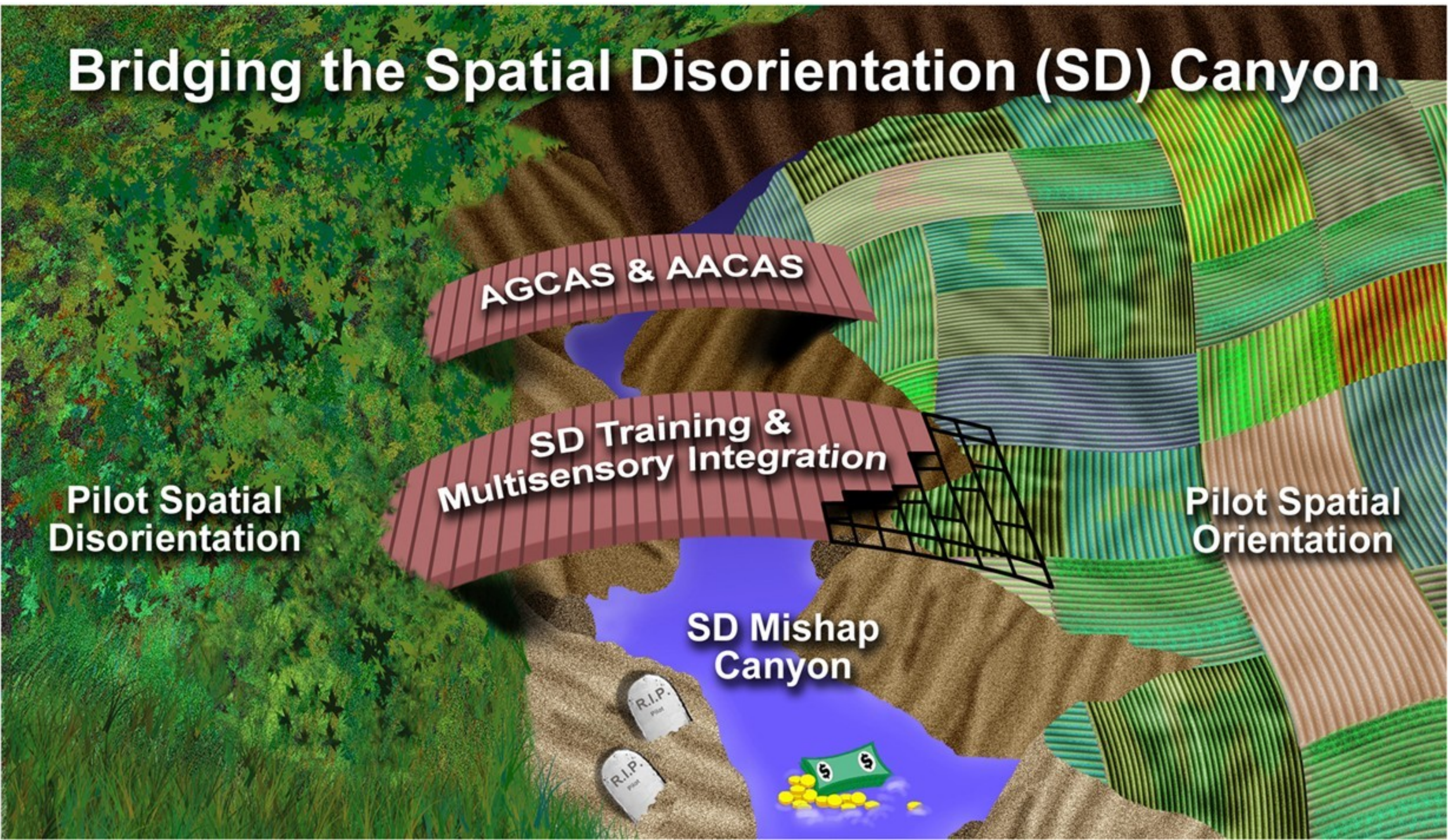
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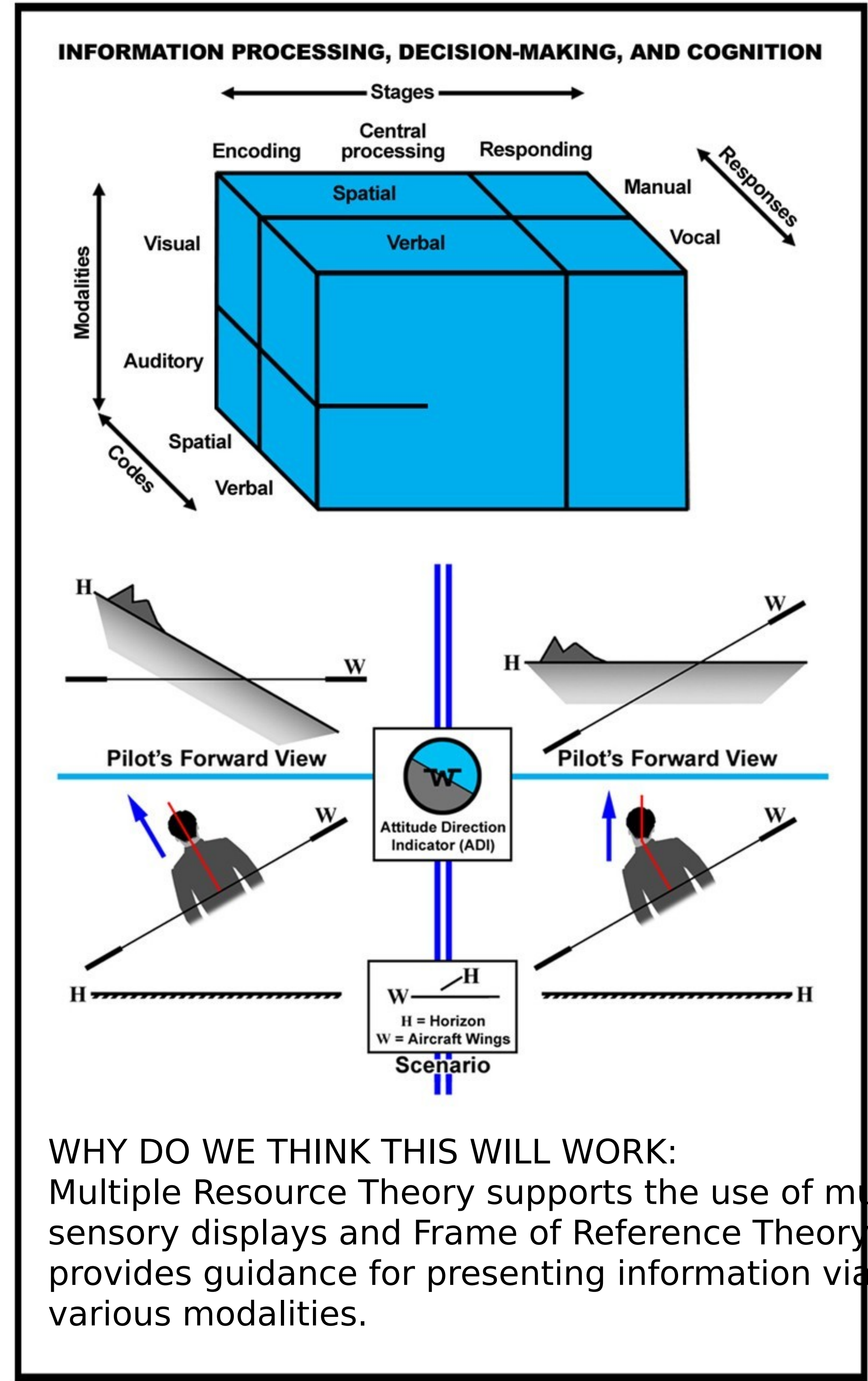
PROBLEM:

On average, Spatial Disorientation (SD) accounts for 25% of all Class A mishaps per year. This statistic has remained virtually unchanged for the past 30 years. SD accidents result in lost lives and aircraft. The exact impact of SD on mission effectiveness is currently unknown.



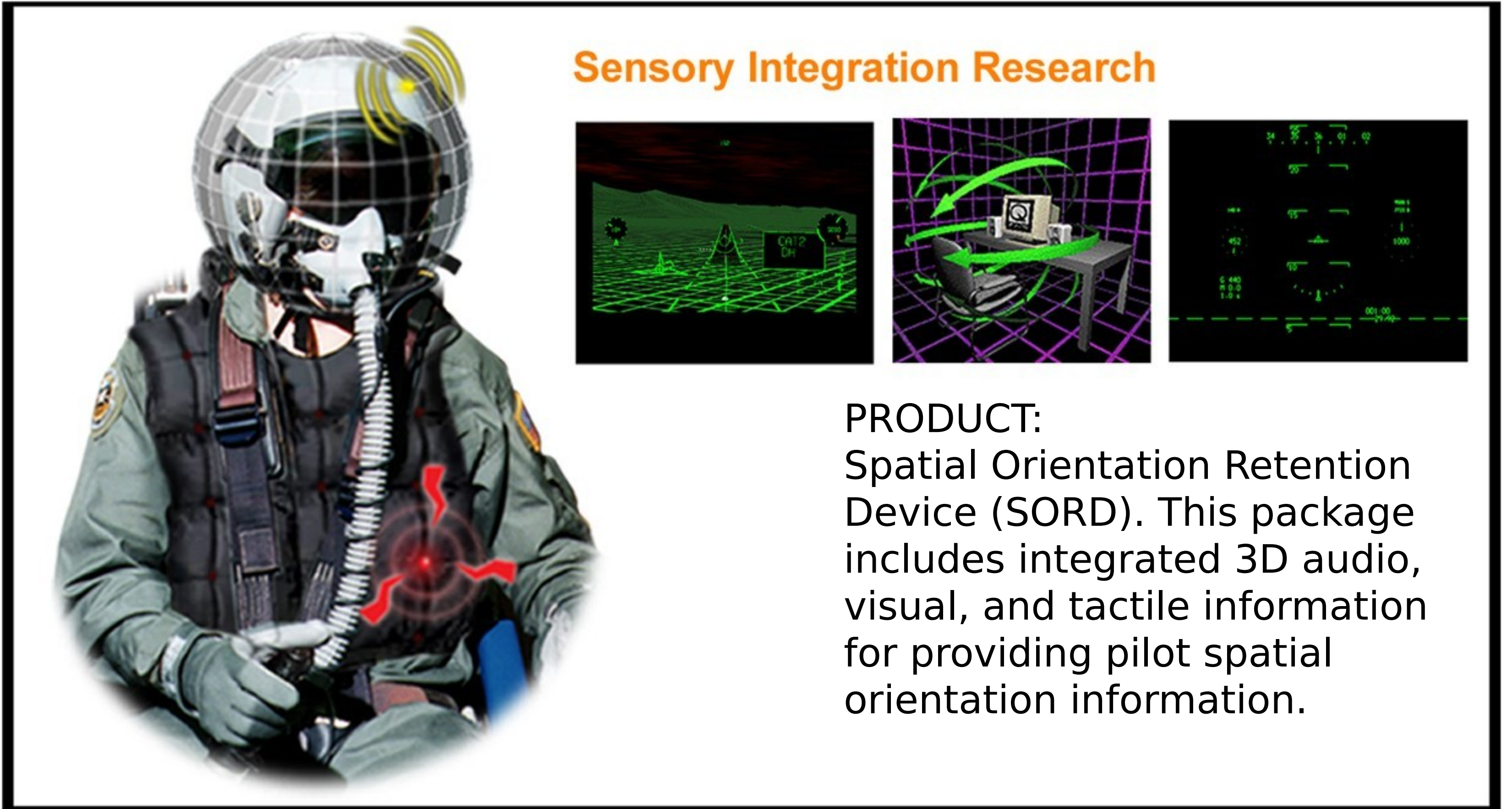
APPROACH:

Combine enhanced SD training and multisensory displays to help pilots retain orientation while maintaining control of their aircraft. Multisensory integration focuses on investigating the use of integrated sensory displays to provide spatial orientation information via the multiple human sensory channels, while at the same time reducing the chance of the loss of situational awareness.



WHY DO WE THINK THIS WILL WORK:

Multiple Resource Theory supports the use of multisensory displays and Frame of Reference Theory provides guidance for presenting information via the various modalities.



PRODUCT:

Spatial Orientation Retention Device (SORD). This package includes integrated 3D audio, visual, and tactile information for providing pilot spatial orientation information.



SD Research Facilities

